

cold waves appear first in the region northeast of Lake Onega. The wave then moves, in general, southeastward with a velocity of 600 or 700 kilometers per day, forming a long curved band. In most cases the wave finishes in the southeastern part of European Russia, but some could be traced as far as India and the coast of the Pacific Ocean. Professor Sresnevsky adds some theoretical remarks on the mechanics of these cold waves, for which the reader should consult the original German abstract.

PRIZE OFFERED BY THE GERMAN METEOROLOGICAL SOCIETY.

Dated Berlin, October, 1908.

At the request of Prof. G. Hellman, President of the German Meteorological Society, we publish the following announcement, at the same time expressing the hope that many observers will feel impelled to enter the competition. It is true that the research corps at Mount Weather, Va., are in the most favorable position to compete, but there are available in this country, several sets of the published results of the International Commission for Scientific Aeronautics, and the Editor will gladly do all that he can to aid any of our men in the preparation of a creditable essay in this competition.

Preis ausschreiben der

Deutschen Meteorologischen Gesellschaft.

Die Deutsche Meteorologische Gesellschaft schreibt einen Preis von 3000 (drei Tausend) Mark aus für die beste Bearbeitung der bei den internationalen Aufstiegen gewonnenen meteorologischen Beobachtungen, soweit sie veröffentlicht vorliegen.

Bedingungen.

1. Es steht den Preisrichtern frei, geeignetenfalls den Preis zu teilen.
2. An der Preisbewerbung können sich Angehörige aller Nationen beteiligen.
3. Die anonym einzureichenden Bewerbungsschriften sind in deutscher, englischer oder französischer Sprache zu verfassen, müssen einseitig und gut lesbar geschrieben, ferner mit einem Motto versehen und von einem versiegelten Umschlag begleitet sein, der auf der Aussen-seite dasselbe Motto trägt und inwendig den Namen und Wohnort des Verfassers angibt.
4. Die Zeit der Einsendung endet mit dem 31. Dezember 1911, und die Zusendung ist an den unterzeichneten Vorsitzenden der Gesellschaft (Geheimen Regierungsrat Professor Dr. G. Hellmann, Berlin W. 56, Schinkelplatz 6) zu richten.
5. Die Resultate der Prüfung der eingegangenen Schriften durch fünf Preisrichter werden 1912 in der Meteorologischen Zeitschrift bekannt gegeben werden.

Der Vorsitzende der Deutschen Meteorologischen Gesellschaft.

Hellmann.

Translation.

The German Meteorological Society offers a prize of three thousand marks (M. 3,000) for the best discussion of the published observations secured on the dates of the International Ascents [with kites, sounding balloons, and manned balloons].

CONDITIONS.

1. The judges reserve the right to divide the amount of the prize among two or more contestants, if they feel justified in so doing.
2. Contestants may be of any nationality.
3. The essays or memoirs submitted in competition may be written in German, English, or French. The manuscript must

be legibly written, on one side of the sheet only, and signed with an anonymous motto. The paper must be accompanied by a sealed envelop bearing the motto on the outside, and containing a slip of paper with the name and residence of the competitor.

4. The competition will close December 31, 1911. The manuscripts should be sent [by registered mail] to the following address:

Geheime Regierungsrat Professor Dr. G. Hellman,
Schinkelplatz 6, Berlin, W. 56., Germany.

5. The memoirs submitted will be examined by five judges and their decision will be announced during 1912 in the pages of the Meteorologische Zeitschrift.

Signed: Hellmann,
President German Meteorological Society.

A CALIFORNIA CLOUDBURST.

By J. S. DOUGLAS, San Emigdio Rancho, Kern Co., California.
[U. S. Geological Survey Press Bulletin, October 12, 1908.]

In the upper reaches of San Emigdio Canyon, Kern County, Cal., cloudbursts have at many places stripped the mountain slopes bare of their forest cover and swept great trees and masses of rock many miles from their source. Just where the creek breaks from the hills is the hacienda of San Emigdio Rancho, and the superintendent of the rancho, J. S. Douglas, who has had ample opportunity to observe the cloudbursts, gave the following description to H. R. Johnson, of the United States Geological Survey.

The cloudburst * * * issued from Cloudburst Canyon into San Emigdio Canyon about 8 miles above this ranch house. I had been expecting the occurrence, as the premonitory signs had been very pronounced for two or three days previously, viz, immense masses of white snowy clouds in the forenoons, changing in color to inky blackness in the afternoons, with the accompaniment of thunder. The weather was sultry, with occasional gusts of cool wind rushing down the canyon, an unusual occurrence during the day in summer time.

Some time before [the wave of mud and water] made its appearance, probably fifteen minutes, its dull and heavy roar could be heard from up the canyon, quite distinct from and rising above all the other noises of the storm and reminding me of breakers against a rocky shore. As it issued from the narrow mouth of Cloudburst Canyon into the comparatively broad one of San Emigdio, it was accompanied by a cloud of dust occasioned by the breaking up of huge masses of dry soil torn from projecting points in its rush down the canyon.

Through the dust glimpses would be had of great piles of drift with an occasional tree turning end over end * * *

After reaching the main canyon it spread to a width of probably 200 yards, and after descending about one-half mile came to a full stop, only to be succeeded in a few moments by another wave larger and swifter than the first. There was no dust about this or any of the succeeding waves, but immense masses of rock, many of which must have weighed several tons, were apparently dancing along, light as corks on the surface, being supported by the rocky mass beneath.

This wave extended about one-half mile farther down the canyon than the first, when it also came to a stop, having spread to the full width of the canyon (about one-fourth mile here).

In a few moments another wave of mud swept by, followed by others at intervals of a few minutes, each succeeding wave getting thinner and traveling with greater velocity than the preceding ones, until finally in about half an hour it was mud no longer, but a steady rush of a yellow foaming torrent, at first probably 100 yards wide in the main canyon, gradually reducing its width and increasing its depth and swiftness as it washed out a channel in the soft mud.

In answer to your question as to the distance and size of rocks moved by cloudbursts, I will give you a description of one which lies on the bank of the creek close to this house. It is a sandstone boulder which has come from 7 miles above and as near as it can be measured, owing to its irregular shape, gives the following dimensions: Height 8 feet, length 16 feet, width 12 feet. On the plains (the San Joaquin Valley) about 5 miles east of here, in sec. 22, T. 11 N., R. 21 W., several masses much larger than this can be seen. These were brought down the Pleito Canyon by cloudbursts.

Commenting on this description Mr. Johnson says:

The interesting point about the cloudburst described above is its ebb and swing. It has been further learned that the first wave which brings down the coarsest debris often forms a dam at or near the canyon's entrance. It is as a result of the impact between the later waves and